

AMENDMENTS TO THE CLAIMS

Please **AMEND** claims 1, 3, 4 and 5 as shown below.

The following is a complete list of all claims in this application.

1. (Currently Amended) A flat panel display, comprising:
 - a power unit generating a constant voltage;
 - a gate voltage generating unit generating a gate on/off voltage;
 - a controller receiving driving data and a driving control signal and generating a scan control signal, a column control signal, RGB data and digital gamma data having a plurality of gradation values;
 - a scan driver unit receiving the scan control signal and the gate on/off voltage and generating a scan signal;
 - a column driver unit converting the digital gamma data into an analog gradation voltage and generating a column signal based on the column control signal, the RGB data and the analog gradation voltage, the column driver unit comprising:
 - a first D/A converter converting the digital gamma data into an analog gradation voltage; and
 - a second D/A converter receiving the analog gradation voltage from the first D/A converter and the RGB data from the data latch, selecting the gradation value

corresponding to the RGB data from the data latch and generating a gradation voltage based on the selecting gradation value; and

a flat display panel displaying an image based on the scan signal and the column signal.

2. (Previously Presented) The flat panel display of claim 1, wherein the controller transmits the RGB data of a plurality of bits and the digital gamma data of a plurality of bits to the column driver unit through different transmission lines, respectively.

3. (Currently Amended) The flat panel display of claim 2, wherein the column driver unit comprises a plurality of column driver ICs, each of the column driver ICs comprising:

a memory storing the digital gamma data;

a decoder decoding the digital gamma data stored in the memory;

a the first D/A converter converting the decoded digital gamma data into an analog gradation voltage;

a shift register sequentially shifting an output (?);

a data latch storing the RGB data from the controller and outputting the stored RGB data in accordance with the output from the shift register;

a the second D/A converter receiving the analog gradation voltage from the first D/A converter and the RGB data from the data latch, selecting the gradation value corresponding to the RGB data from the data latch and generating a gradation voltage based on the selecting gradation value; and

a buffer buffering the gradation voltage from the second D/A converter and generating the column signal.

4. (Currently Amended) ~~The~~ A flat panel display of claim 1, comprising:

a power unit generating a constant voltage;

a gate voltage generating unit generating a gate on/off voltage;

a controller comprising: ~~wherein the controller further comprises:~~

a signal processing unit receiving the driving data and the a driving control signal and generating the RGB data, a scan control signal and a column control signal;

a gamma data generating unit generating the digital gamma data with reference to the constant voltage from the said power unit, the digital gamma data having a plurality of gradation values; and

a mixer unit mixing the digital gamma data and the RGB data to form a mixed signal, ~~wherein~~ the digital gamma data is arranged in a blanking section of the RGB data;

a scan driver unit receiving the scan control signal and the gate on/off voltage and generating a scan signal;

a column driver unit converting the digital gamma data into an analog gradation voltage and generating a column signal based on the column control signal, the RGB data and the analog gradation voltage; and

a flat display panel displaying an image based on the scan signal and the column signal.

5. (Currently Amended) The flat panel display of claim 4, wherein the column driver unit comprises a plurality of column driver ICs, and

each of the column driver ICs ~~comprising~~; comprises:

a data diving unit receiving and dividing the mixed signal from the mixer unit into the RGB data and the digital gamma data;

a memory storing the digital gamma data from the data diving unit;

a decoder decoding the digital gamma data from the memory;

a first D/A converter converting the decoded digital gamma data into an analog gradation voltage;

a shift register sequentially shifting a timing pulse;

a data latch storing the RGB data from the data dividing unit and outputting the stored RGB data according to the timing pulse from the shift register;

a second D/A converter receiving the analog gradation voltage from the first D/A converter and the RGB data from the data latch, selecting the gradation value corresponding to the RGB data from the data latch and generating a gradation voltage based on the selected gradation value; and

a buffer buffering the gradation voltage from the D/A converter and generating the column signal.

6. (Previously Presented) A flat panel display, comprising:

a power unit generating a constant voltage;

a gate voltage generating unit generating a gate on/off voltage;

a controller receiving driving data and a driving control signal and generating a scan control signal, a column control signal, RGB data and digital gamma data having a plurality of gradation values with reference to the constant voltage from the power unit, wherein the controller encodes the scan control signal, the column control signal, the RGB data in a differential signal format;

a scan driver unit decoding the differential signal and generating a scan signal based on the scan control signal and the gate on/off voltage;

a column driver unit decoding the differential signal, converting the digital gamma data into an analog gradation voltage, and outputting a column signal based on the column control signal, RGB data and the analog gradation voltage; and

a flat display panel displaying an image based on the scan signal and the column signal.

7. (Previously Presented) The flat panel display of claim 6, wherein the controller comprises:

a signal processing unit receiving the driving data and the driving control signal and generating the RGB data, the scan control signal and the column control signal;

a gamma data generating unit generating the digital gamma data with reference to the constant voltage from the power unit; and

a differential signal transmitting unit encoding the scan control signal, the column control signal, the RGB data and the digital gamma data in the differential signal format.

8. (Previously Presented) The flat panel display of claim 7, wherein the column driver unit comprises a plurality of column driver ICs, each of the column driver ICs comprising;

- a differential signal receiving unit decoding the differential signal;
- a memory storing the decoded column control signal, the RGB data and the digital gamma data;
- a decoder decoding the digital gamma data stored in the memory;
- a first D/A converter converting the decoded digital gamma data into an analog gradation voltage;
- a shift register sequentially shifting a timing pulse;
- a data latch storing the RGB data from the memory and outputting the RGB data according to the timing pulse from the shift register;
- a second D/A converter receiving the analog gradation voltage from the first D/A converter and the RGB data from the data latch, selecting the gradation value corresponding to the RGB data from the data latch and generating a gradation voltage based on the selected gradation value; and
- a buffer buffering the gradation voltage output from the second D/A converter and outputting the column signal.

9. (Previously Presented) The flat panel display of claim 6, wherein the differential signal is an RSDS signal.

10. (Previously Presented) The flat panel display of claim 6, wherein the differential signal is an LVDS signal.

11. (Previously Presented) The flat panel display of claim 6, wherein the differential signal is a TMDS signal.

12. (Previously Presented) The flat panel display of claim 7, wherein the differential signal is an RSDS signal.

13. (Previously Presented) The flat panel display of claim 7, wherein the differential signal is an LVDS signal.

14. (Previously Presented) The flat panel display of claim 7, wherein the differential signal is a TMDS signal.

15. (Previously Presented) The flat panel display of claim 8, wherein the differential signal is an RSDS signal.

16. (Previously Presented) The flat panel display of claim 8, wherein the differential signal is an LVDS signal.

17. (Previously Presented) The flat panel display of claim 8, wherein the differential signal is a TMDS signal.